

reported by China's mainstream media and more than 2 million people viewed the news online.

With the support of several conservation projects, research has examined the threats to these two species, and conservation measures have been implemented. The wild populations of both species are protected by national natural reserves and micro-conservation sites established by local government departments. Thousands of seedlings have been propagated, some of which have been used for reinforcement and reintroduction in natural and semi-natural sites within the species' known range, and others are being cultivated in various botanical gardens.

LIDAN TAO (orcid.org/0000-0002-1396-0524, wbsun@mail.kib.ac.cn) and WEIBANG SUN Yunnan Key Laboratory for Integrative Conservation of Plant Species with Extremely Small Populations, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, Yunnan, China. ZHIFA CHEN Kunming Botanical Garden, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, Yunnan, China

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY NC 4.0](https://creativecommons.org/licenses/by-nc/4.0/).

An integrative approach for fungal conservation in southern Brazil

Tropical cloud forests are characterized by occurring at mid to high elevations, and having high relative humidity, frequent presence of clouds, high biodiversity and a high per cent of endemic species. As a result of the intrinsic characteristics of this ecosystem, many of its species, in particular endemics, are highly threatened.

Since 2011, to mitigate the perilous combination of a threatened habitat and lack of knowledge about the fungi of the cloud forests of southern Brazil, the MIND.Funga initiative (mindfunga.ufsc.br) has been carrying out taxonomic and biodiversity studies and Red List assessments, as well as promoting citizen science and environmental education. More than 2,000 specimens of macrofungi, representing over 700 species, have been studied, new species described and an environmental education book for children published (mindfunga.ufsc.br/nossos-projetos/sbpc-vai-a-escola/?lang=en). Up to August 2021 the book had been downloaded c. 3,200 times.

On 25 March 2021, conservation assessments of three additional species were published on the IUCN Red List: *Skeletocutis roseola* and *Stropharia venusta* are categorized as Vulnerable and *Wrightoporia araucariae* as Critically Endangered. These are among the first Brazilian fungal species to be included on the Red List. So far, 46 species occurring in Brazil have been assessed.

Since March 2021, to improve knowledge of fungi in Brazil and to provide a new tool for conservation, we have been developing a citizen science programme. As part of this, a mobile application has been developed. We have so far trained 30



The Vulnerable *Laetiporus squalidus* (iucnredlist.org/species/187000831/187004590), a rare brown-rot polypore known only from the cloud forests and other montane ecosystems of the Serra do Mar. Photo: Cauê Azevedo Tomas de Oliveira.

collaborating citizens in using the application, and they have already registered 802 images of fungi, representing 206 specimens from cloud forests and adjacent areas, amongst which we have so far identified 74 species. The species most commonly found is *Schizophyllum commune* and none of the species known to be threatened have so far been recorded in this way. As a research group we believe that contributing to improved knowledge of the fungi of cloud forests in association with non-scientists, including children, will improve both fungal conservation and the conservation of the cloud forests of southern Brazil. These MIND.Funga initiatives are supported by Fundação de Amparo à Pesquisa e Inovação de Santa Catarina (PRONEM2020TR733) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (PQ311158/2018-8).

DIOGO H. COSTA-REZENDE (orcid.org/0000-0002-7381-6954) Laboratório de Pesquisa em Microbiologia, Departamento de Biologia, Universidade Estadual de Feira de Santana, Feira de Santana, Bahia, Brazil. THIAGO KOSSMANN (orcid.org/0000-0003-2858-7838), MAHATMÁ TITTON (orcid.org/0000-0001-7139-5116) and ELISANDRO RICARDO DRECHSLER-SANTOS* (orcid.org/0000-0002-3702-8715, drechslersantos@yahoo.com.br) Laboratório de Micologia, Departamento de Botânica, Universidade Federal de Santa Catarina, Campus Universitário Trindade, Florianópolis, Santa Catarina, Brazil
*Also at: IUCN Species Survival Commission Mushroom, Bracket, and Puffball Specialist Group

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/).

New toolkit to support teachers to teach about Philippine biodiversity

A group of biodiversity researchers and conservation practitioners in the Philippines has teamed up with the country's